



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,853	07/28/2006	Paolo Molendi	82062-190	7337

24633 7590 06/30/2008
HOGAN & HARTSON LLP
IP GROUP, COLUMBIA SQUARE
555 THIRTEENTH STREET, N.W.
WASHINGTON, DC 20004

EXAMINER

TREIDL, JESSICA I

ART UNIT	PAPER NUMBER
----------	--------------

1796

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

06/30/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

dcpatent@hhlaw.com
rogruwel@hhlaw.com

Office Action Summary	Application No. 10/567,853	Applicant(s) MOLENDI, PAOLO	
	Examiner JESSICA TREIDL	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 14-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 32 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/10/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I (claims 1-13 and 32-33) in the reply filed on 05/30/2008 is acknowledged. Claims 14-31 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

The information disclosure statement filed 02/10/2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. Legible copies of the following foreign patent documents have not been provided: EP 1205503, JP 01252623, WO 99/23122, EP 0270831 and EP 0575637. The information disclosure sheet has been placed in the application file, but the foreign patent documents referred to therein have not been considered.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that

Art Unit: 1796

the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it contains legal phraseology such as the phrases "said compositions" and "said chemical compositions". Correction is required. See MPEP § 608.01(b).

Claim Objections

Claim 5 is objected to because it appears to contain a typo. Applicant recites "1,6-Hexanediol acrylate (HDDA)", however HDDA is hexanediol diacrylate. For the purposes of this office action, the compound "1,6-Hexanediol acrylate" will be interpreted to be mean "1,6-Hexanediol diacrylate." Appropriate correction is required.

Claim 6 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The instant claim recites "said monomers having functionality comprised of between 1 and 5." However all of the monomers listed in the parent claim, claim 5, already have between 1 and 5 functional groups.

Claim 7 is objected to because it recites the monomers being N-vinyl-2-pyrrolidone, a compound not included in the list of possible compounds recited in claim 5, the claim upon which claim 7 depends. Appropriate correction is required.

Claim 8 is objected to because it contains the following typo: "consisting of_esters." Appropriate correction is required.

Claim 11 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The instant claim recites an embodiment of the composition further comprising additives in a quantity of 0 %, i.e. adding no additives.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 2, and 33, applicant recites the components of the claimed composition in "%". It is not clear if this is weight %, mol % vol % . . . For the purposes of this office action, the term "%" will be interpreted to mean weight %.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-6 and 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by (US 6,251,962).

Regarding claims 1, 2 and 3, Desobry et al teach a polymerizable mixture of ~26 wt% hydroxypropylacrylate {transparent hydroxylated acrylic resin}, ~40.8 wt% butylmethacrylate {acrylate or methacrylate monomers}, ~25 wt% solvent and ~2.9 wt% photoinitiator (Example 13, 13:20-30, per Examiner's calculations).

Regarding claims 5 and 6, Desobry et al teach isobornyl methacrylic acid ester (ie isobornyl methacrylate) {one functional group} (4:37-38).

Regarding claim 8, Desobry et al teach butylacetate as the solvent {an ester compound} (13:25).

Regarding claim 9 and 10, Desobry et al teach the photoinitiator being 1-hydroxycyclohexyl phenyl ketone (11:37-38 and 13:22).

Regarding claim 11, Desobry et al teach 0 wt % additive (Example 13, 13:20-30).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1796

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3, 4, 5, 6, 8, 9, 11 and 32 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Flosbach et al (US 6,332,291) in view of Inoue et al (US 6,255,392).

Regarding claims 1-3, 5, 6, 8, and 9, Flosbach et al teach a radiation-curable transparent (11:7-10) automotive coating (Abstract) comprising:

- a hydroxylated (meth)acryloyl-functional urethane {hydroxylated acrylic resin} [instant claims 1 and 3] (4:44-5:17)
- reactive diluents {monomers selected from oligoethers and acrylate or methacrylate monomers} (see hexanediol di(meth)acrylate {having a functionality of two} [instant claims 1, 5 and 6] 6:63), in a quantity of 1 to 50 wt % [instant claims 1,2] (6:52)

Art Unit: 1796

- solvent (see methyl ethyl ketone or aliphatic hydrocarbons [instant claim 8] 8:63-9:12)
- photoinitiators (see benzophenone [instant claim 9] 8:39-45), in a quantity of 0.5 to 5 wt% [instant claims 1 and 2] (8:46-47)

Flosbach et al teach a broad range of the amount of the hydroxylated acrylic resin in the composition (8:14-15, ~less than 10 to ~less than 90 wt % per Examiner's approximations), but do not explicitly disclose the range in terms of weight percent of the total composition.

However, Inoue et al teach a clear curable scratch-resistant topcoat composition for automobiles (Abstract and 1:5-17) comprising hydroxylated acrylic resin (see Component B 10:60-11:45 and Component D 16:5-17:25) and solvent (15:21-30). Furthermore, Inoue et al teach that hydroxyl group containing compounds in the composition lowers the water resistance and acid resistance of the composition (14:51-54 and 16:20-26). At the time of invention a person of ordinary skill in the art would have found the claimed range of the hydroxylated acrylic resin obvious through routine experimentation in an effort to optimize curing properties while taking into account the water and acid resistance of the composition. (In re Aller, 105 USPQ 223.) See MPEP § 2144.05.

Regarding claim 11, Flosbach et al teach adding an additive (8:52-62).

Regarding claims 4 and 32, Flosbach et al and Inoue et al render the basic claimed composition obvious [with respect to claim 1 above]. Flosbach et al teach that

the hydroxylated acrylic resin compound can be created to contain carboxyl groups (3:4 and 5:54).

Flosbach et al is silent to the carboxylic functionality of the disclosed hydroxylated acrylic resin. However, Inoue et al teach a clear curable scratch-resistant topcoat composition for automobiles (Abstract and 1:5-17)) comprising hydroxylated acrylic resins (see Component B 10:60-11:45 and Component D 16:5-17:25) and a solvent (15:21-30). Furthermore, Inoue et al teach that a compound having preferably 2 to 6 carboxyl groups raises the adhesion and curability of the composition [instant claims 4 and 32] (16:5-10). Flosbach et al and Inoue et al are combinable because they are concerned with a similar technical difficulty, namely the preparation of transparent curable topcoat automobile compositions comprising hydroxylated acrylic resins. At the time of invention a person of ordinary skill in the art would have found it obvious to have used an hydroxylated acrylic resin having a carboxylic functionality of 2 to 6, as taught by Inoue et al, as the hydroxylated resin of Flosbach et al and would have been motivated to do so since Inoue et al suggests that a compound having preferably 2 to 6 carboxyl groups raises the adhesion and curability of the composition (16:5-10) and is an equivalent alternative means for providing an hydroxylated acrylic resin.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flosbach et al (US 6,332,291) and Inoue et al (US 6,255,392), as applied to claim 5 above, and in view of Snowwhite et al (US 6,136,800).

Art Unit: 1796

Regarding claim 7, Flosbach et al and Inoue et al render the basic claimed composition obvious [with respect to claim 5 above] and specifically teach the reactive diluent {oligoethers and acrylate or methacrylate monomers} being 1,6-hexanediol di(meth)acrylate, trimethylolpropane tri(meth)acrylate, pentaerythritol tri(meth)acrylate (6:63-66) among others.

Flosbach et al do not teach the reactive diluent being N-vinyl-2-pyrrolidone. However, Snowwhite et al teach a transparent (11:8-11) radiation curable composition (Abstract) comprising a urethane acrylate oligomer (6:46-7:9 & 19:12-35), a hydroxylated acrylic resin (17:35-37), polymerizable compounds (13:11-68) {monomers selected from oligoethers of diacrylate or methacrylate monomers}, solvent (17:44) and a photoinitiator (14:22-31). Furthermore Snowwhite et al teach the polymerizable compound to be compounds such as trimethylolpropane tri(meth)acrylate (13:49-50), pentaerythritol tri(meth)acrylate (13:50-51), 1,6-hexanediol di (meth)acrylate (13:53) and N-vinyl pyrrolidone [instant claim] (13:24 & 19:31). Flosbach et al and Snowwhite et al are combinable because they are concerned with a similar technical difficulty, namely the preparation of transparent radiation curable compositions comprising urethane acrylate compounds, a reactive monomer and a photoinitiator. At the time of invention a person of ordinary skill in the art would have found it obvious to have used N-vinyl pyrrolidone, taught by Snowwhite et al, as the reactive diluent of Flosbach et al and would have been motivated to do so since Snowwhite et al suggests N-vinyl pyrrolidone and 1,6-hexanediol di(meth) acrylate to be equivalent alternative polymerizable

Art Unit: 1796

monomers for a transparent radiation curable composition comprising urethane acrylate compounds, a polymerizable monomer and a photoinitiator.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flosbach et al (US 6,332,291) Inoue et al (US 6,255,392), as applied to claim 9 above, and in view of Okada et al (US 2003/0129300).

Regarding claim 10, Flosbach et al and Inoue et al render the basic claimed composition obvious [with respect to claim 9 above] and teach the photoinitiator being benzoin, bezophenone, acetophenone and derivates thereof (8:39-51).

Flosbach et al do not explicitly teach the photoinitiator being one of the those recited in the instant claim. However Okada et al teach a clear scratch-resistant photocurable coating for automobiles ([0002], [0006]) comprising an acrylic resin ([0018]), a (meth)acrylate reactive diluent monomer ([0019]) and a photoinitiator ([0020]). Furthermore, the reference teaches the initiator being acetophenone based compounds such as 2-hydroxy-2-methyl-1-phenylpropane-1-on, or 1-hydroxycyclohexylphenyl ketone ([0020]). Flosbach et al and Okada et al are combinable because they are concerned with a similar technical difficulty, namely the preparation of curable acrylate-based compositions. At the time of invention a person of ordinary skill in the art would have found it obvious to have used 2-hydroxy-2-methyl-1-phenylpropane-1-on, or 1-hydroxycyclohexylphenyl ketone, as taught by Okada et al, in place of the photoinitiator of Flosbach et al and would have been motivated to do since Okada et al suggest that 2-hydroxy-2-methyl-1-phenylpropane-1-on and 1-

Art Unit: 1796

hydroxycyclohexylphenyl ketone are suitable and equivalent alternative acetophenone derived photoinitiators for acrylate based curable automobile coating compositions.

Claims 12-13 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flosbach et al (US 6,332,291) and Inoue et al (US 6,255,392), as applied to claim 11 above, and in view of Huybrechts et al (US 5,977,256), taken with Ciba Manual.

Regarding claims 11-13 and 32, Flosbach et al and Inoue et al render the basic claimed composition obvious [with respect to claim 1 above] and teach adding conventional laquer additives, in quantities familiar to a person skilled in the art (8:52-62). Furthermore, Flosbach et al teach the additives being leveling agents, coupling agents, rheological additives, thickeners, light stabilizers and others (8:57-60).

Flosbach et al do not teach adding the antioxidants of the instant claims and do not teach the additives present in the claimed range. However, Huybrechts et al teach a clear scratch-resistant coating composition for automobiles (1:5-40) comprising a hydroxylated acrylic resin (1:44-68). Huybrechts et al teach additives including light stabilizers, leveling agents, rheology modifiers, ultraviolet absorbers, curing catalysts and others (7:18-24). Furthermore Huybrechts et al teach the composition further comprising ~2.3 wt % antioxidant including Irgamox 1010 [instant claims 12 and 13] (2nd table down Column 11 see Irganox 1010, per Examiner's calculations including: Irganox 1010 and Tinuvin 1130, 292). Flosbach et al and Huybrechts et al are combinable because they are concerned with similar technical difficulty, namely the preparation of clear coatings for automobiles. At the time of invention a person of ordinary skill in the

Art Unit: 1796

art would have found it obvious to have added the ~2.3 wt % anti-oxidant mixture, as taught by Huybrechts et al, to the invention of Flosbach et al and would have been motivated to do so since anti-oxidants, specifically Irganox 1010, scavenge free radicals and prevent discoloration and changes of the mechanical properties of the resin, as evidenced by Ciba Manual (P10).

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA TREIDL whose telephone number is (571)270-3993. The examiner can normally be reached on Monday- Thursday, 7:30AM- 5PM EST, Alt. Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MARK EASHOO/
Supervisory Patent Examiner, Art Unit 1796
23-Jun-08

/J.T./
/6.19.08/